Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (**Original**) A method of providing automatic recovery from operating system faults, said method comprising the steps of:

detecting a system fault;

analyzing the system fault;

determining a cause of the system fault;

determining a solution; and

applying a solution.

2. The method according to Claim 1, further comprising the steps of:

providing a resolution test; and

returning to production.

3. (**Original**) The method according to Claim 1, wherein at least one of the recited steps does not require any work.

4. (**Original**) The method according to Claim 2, wherein at least one of the recited steps does not require any work.

5. (**Original**) The method according to Claim 1, wherein said detecting step comprises at least one of:

an operating system call to a halting routine; and

an exception or error associated with at least one of: an operating system, middleware, firmware and Licensed Internal Code.

6. (**Original**) The method according to Claim 1, wherein said detecting step comprises an abnormal termination of a driver or application.

7. (**Original**) The method according to Claim 1, wherein said detecting step comprises a hypervisor observation of unusual behavior from a guest operating system.

8. (**Original**) The method according to Claim 1, wherein said detecting step comprises an interception of a call to an operating system halting routine or exception handler.

9. (**Original**) The method according to Claim 1, wherein said detecting step comprises automatically inspecting at least one aspect relating to the operating system.

10. (**Original**) The method according to Claim 9, wherein said detecting step comprises automatically inspecting at least one of: main memory; a kernel stack; process stacks; a state of all running threads; an amount of pageable memory used; an amount of

pageable memory free for use; an amount of total pageable memory in the system; an amount of total pageable memory available to the operating system kernel; an amount of non-pageable memory used; an amount of Non-pageable memory free for use; an amount of total non-pageable memory in the system; an amount of total non-pageable memory available to the operating system kernel; a number of system page table entries used; a number of system page table entries available for use; an amount of virtual memory allocated to a system page table; a size of a system cache; a size of a page cache; a size of a file cache; an amount of space available in a system cache; an amount of space available in a page cache; an amount of space available in a file cache; a size of a system working set; a number of system buffers available; page sizes; a number of network connections established; utilization of one or more central processing units; a number of threads allocated; a percentage of time spent in a kernel; a number of system interrupts per unit time; a number of page faults per unit time; a number of page faults in a system cache per unit time; a number of paged pool allocations per unit time; a number of non-paged pool allocations per unit time; a length of look-aside lists; a number of open file descriptors; an amount of free space on a disk or disks; a percentage of time spent at interrupt level; a number of device drivers that are loaded; status of loaded device drivers; a number of outstanding I/O requests for device drivers; a state of devices attached to the system.

11. (**Original**) The method according to Claim 9, wherein said step of automatically inspecting comprises determining a degree of memory corruption.

12. (**Original**) The method according to Claim 11, wherein manual fault resolution is prompted if memory corruption is detected.

13. (**Original**) The method according to Claim 9, wherein said step of automatically inspecting is performed via software.

14. (**Original**) The method according to Claim 1, wherein said step of determining a cause comprises identifying at least one faulty component.

15. (**Original**) The method according to Claim 14, wherein said analyzing step provides input into said step of determining a cause.

16. (**Original**) The method according to Claim 14, wherein external information provides input into said step of determining a cause.

17. (**Original**) The method according to Claim 1, wherein said step of applying a solution comprises effecting one or more changes or updates in at least one of: device driver software, operating system code, and firmware.

18. (**Original**) The method according to Claim 17, wherein said step of effecting one or more changes or updates comprises deactivating faulty software.

19. (**Original**) The method according to Claim 2, wherein said step of providing a resolution test comprises monitoring a new component during a trial period.

20. (**Original**) The method according to Claim 19, wherein the trial period is over a finite period of time.

21. (**Original**) The method according to Claim 19, wherein the status of the new component is reported subsequent to the trial period.

22. (**Original**) The method according to Claim 21, wherein at least one of the following steps is repeated upon determination of a negative status of the new component: detecting a system fault; analyzing the system fault; determining a cause of the system fault; determining a solution; applying a solution; and providing a resolution test.

23. (**Original**) An apparatus for providing automatic recovery from operating system faults, said apparatus comprising:

an arrangement for detecting a system fault;

an arrangement for analyzing the system fault;

an arrangement for determining a cause of the system fault;

an arrangement for determining a solution; and

an arrangement for applying a solution.

24. (**Original**) The apparatus according to Claim 23, further comprising:

an arrangement for providing a resolution test; and

an arrangement for returning to production.

25. (**Original**) The apparatus according to Claim 23, wherein said detecting arrangement is adapted to provide at least one of:

an operating system call to a halting routine; and

an exception or error associated with at least one of: an operating system, middleware, firmware and Licensed Internal Code.

26. (**Original**) The apparatus according to Claim 23, wherein said detecting arrangement is adapted to provide an abnormal termination of a driver or application.

27. (**Original**) The apparatus according to Claim 23, wherein said detecting arrangement is adapted to provide a hypervisor observation of unusual behavior from a guest operating system.

28. (**Original**) The apparatus according to Claim 23, wherein said detecting arrangement is adapted to provide an interception of a call to an operating system halting routine or exception handler.

29. (**Original**) The apparatus according to Claim 23, wherein said detecting arrangement is adapted to automatically inspect at least one aspect relating to the operating system.

30. (**Original**) The apparatus according to Claim 29, wherein said detecting arrangement is adapted to automatically inspect at least one of: main memory; a kernel stack; process stacks; a state of all running threads; an amount of pageable memory used; an amount of pageable memory free for use; an amount of total pageable memory in the

system; an amount of total pageable memory available to the operating system kernel; an amount of non-pageable memory used; an amount of Non-pageable memory free for use; an amount of total non-pageable memory in the system; an amount of total non-pageable memory available to the operating system kernel; a number of system page table entries used; a number of system page table entries available for use; an amount of virtual memory allocated to a system page table; a size of a system cache; a size of a page cache; a size of a file cache; an amount of space available in a system cache; an amount of space available in a page cache; an amount of space available in a file cache; a size of a system working set; a number of system buffers available; page sizes; a number of network connections established; utilization of one or more central processing units; a number of threads allocated; a percentage of time spent in a kernel; a number of system interrupts per unit time; a number of page faults per unit time; a number of page faults in a system cache per unit time; a number of paged pool allocations per unit time; a number of non-paged pool allocations per unit time; a length of look-aside lists; a number of open file descriptors; an amount of free space on a disk or disks; a percentage of time spent at interrupt level; a number of device drivers that are loaded; status of loaded device drivers; a number of outstanding I/O requests for device drivers; a state of devices attached to the system.

31. (**Original**) The apparatus according to Claim 29, wherein said detecting arrangement is adapted to determine a degree of memory corruption.

32. (**Original**) The apparatus according to Claim 31, wherein manual fault resolution is prompted if memory corruption is detected.

33. (**Original**) The apparatus according to Claim 29, wherein said detecting arrangement is adapted to perform automatic inspecting via software.

34. (**Original**) The apparatus according to Claim 23, wherein said arrangement for determining a cause is adapted to identify at least one faulty component.

35. (**Original**) The apparatus according to Claim 34, wherein said analyzing arrangement provides input into said arrangement for determining a cause.

36. (**Original**) The apparatus according to Claim 34, wherein external information provides input into said arrangement for determining a cause.

37. (**Original**) The apparatus according to Claim 23, wherein said arrangement for applying a solution is adapted to effect one or more changes or updates in at least one of: device driver software, operating system code, and firmware.

38. (**Original**) The apparatus according to Claim 37, wherein said arrangement for effecting one or more changes or updates is adapted to deactivate faulty software.

39. (**Original**) The apparatus according to Claim 24, wherein said arrangement for providing a resolution test comprises monitoring a new component during a trial period.

40. (**Original**) The apparatus according to Claim 39, wherein the trial period is over a finite period of time.

41. (**Original**) The apparatus according to Claim 39, wherein said arrangement for providing a resolution test is adapted to report the status of the new component subsequent to the trial period.

42. (**Original**) The apparatus according to Claim 41, wherein at least one of the following is repeated upon determination of a negative status of the new component: detecting a system fault; analyzing the system fault; determining a cause of the system fault; determining a solution; applying a solution; and providing a resolution test.

43. (**Original**) A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for providing automatic recovery from operating system faults, said method comprising the steps of:

detecting a system fault;

analyzing the system fault;

determining a cause of the system fault;

determining a solution; and

applying a solution.